

CPG Technical Response
Interim Remedy Feasibility Study
RAO 2 Erosional Areas
February 18, 2019

The CPG's technical consultants (Anchor QEA and Moffat & Nichol) have reviewed the difference between acreages that experienced erosion between the 2008 and 2010 bathymetric surveys reported in the CPG's RAO2 memo and the Draft RI Report Appendix M Attachment B, which was raised by John Wolfe on behalf of NJDEP during the February 13, 2019 FS meeting. The CPG's understanding is that John Wolfe used Figure 4-16 (middle panel; shown below) in Appendix M Attachment B to estimate the 2008-2010 erosional area by summing the "Both Erosion" and "Ero. 08-10/Dep. 10-11" categories, which yields about 70 acres from RM 8.3 to 15 (RM 8 to 14.7 in the RI/FS river miles used in the figure). This acreage was contrasted to the CPG's RAO2 memo, which reports 26.4 acres as having 6 inches or more erosion in the period 2008-2010. The CPG has concluded that these differences arise due to differences in the threshold used to designate an area as erosional. The CPG's RAO2 memo identified erosional areas are those that experienced 6 inches or more of erosion, whereas Figure 4-16 includes additional areas in which the bathymetric change was between zero and 6 inches.

Bathymetric changes less than 6 inches were not considered in the RAO2 memo because of a focus on erosion sufficient to expose the layer below the top 6 inches and a recognition of the uncertainty of smaller changes.

Additional details are provided below.

Analysis in RAO2 memo

Sediments that experienced erosion between surveys in 2008 and 2010 were chosen as the test locations to evaluate the extent to which these further eroded between the 2010 and 2011 surveys (which includes Hurricane Irene). Specifically, the test locations were defined as areas with 6 inches or more of erosion between 2008 and 2010 which also had bathymetry coverage in the 2011 survey. Of the 28.7 acres with 6 inches or more of erosion between the 2008 and 2010 surveys, 26.4 acres were also covered by the 2011 survey and therefore selected as test locations. Thus, Table 1 of the memo reports 26.4 acres of erosional area for the purposes of the erosion likelihood analysis.

Analysis in Figure 4-16 (middle panel) of Attachment B of Appendix M

In RI Appendix M, the two erosional categories noted above were defined as follows:

- "Ero 08-10/Dep 10-11" includes all areas with greater than zero erosion in 2008-2010 followed by greater than zero deposition in 2010-2011
- "Both Erosion" includes areas with greater than zero erosion in 2008-2010 and greater than zero erosion 2010-2011, provided the total erosion across from 2008-2011 is at least 6 inches.

The CPG confirmed John Wolfe's estimate that applying the above rules yields about 70 acres of erosion.

Because this analysis does not impose the 6-inch erosion threshold in assigning locations as erosional in 2008-2010, the acreage estimates in Figure 4-16 are incompatible with the RAO2 memo evaluations.

